

AMENDMENTS TO THE CLAIMS

1-6. (Canceled)

7. (Previously Presented) The pneumatic structural element according to Claim 22, wherein:

at least one end cap is received by and enclosed by the gas-tight inflatable hollow body;
the at least one end cap can be introduced flush into the gas-tight inflatable hollow body;
and
the at least one end cap and the gas-tight inflatable hollow body are sealed in a gas-tight manner.

8. (Previously Presented) The pneumatic structural element according to Claim 7, wherein:

the at least one end cap comprises a cylindrical part disposed at least in part within the gas-tight inflatable hollow body and a non-cylindrical part disposed at least in part exterior of the gas-tight inflatable hollow body; and

at least one first O-ring is disposed in a respective first O-ring groove disposed in the cylindrical part and a second O-ring is disposed in a second O-ring groove disposed in the opening of the rigid plate-shaped flange.

9. (Previously Presented) The pneumatic structural element of claim 22, comprising:
a nodal connecting element operable to facilitate attachment of the rigid plate-shaped flange thereto; and

wherein the nodal connecting element is arranged such that bearing forces can be introduced into the rigid plate-shaped flange.

10-11. (Canceled)

12. (Previously Presented) The pneumatic structural element according to Claim 9, wherein the nodal connecting element is a frame structure on which the rigid plate-shaped flange can be fastened.

13. (Currently Amended) The pneumatic structural element according to Claim 12, wherein the nodal connecting element is polygonal in at least one projection, and at least one rigid plate-shaped ~~element~~ flange can be fastened on at least one side wall of the nodal connecting element.

14. (Previously Presented) The pneumatic structural element according to Claim 13, wherein a plurality of rigid plate-shaped flanges can be fastened on a plurality of sides of the connecting element.

15-16. (Canceled)

17. (Previously Presented) The pneumatic structural element according to Claim 12, wherein the nodal connecting element comprises a tetrahedron shape and the rigid plate-shaped flange can be fastened to a side of the nodal connecting element.

18. (Previously Presented) The pneumatic structural element according to Claim 12, wherein the nodal connecting element comprises a cube shaped external form and the rigid plate-shaped flange can be fastened to a side of the nodal connecting element.

19. (Previously Presented) The pneumatic structural element according to Claim 12, wherein the nodal connecting element comprises a truncated pyramid external form and the rigid plate shaped flange can be fastened to a side of the nodal connecting element.

20. (Previously Presented) The pneumatic structural element according to Claim 12, wherein the rigid plate-shaped flange is fastened to the nodal connecting element by way of at least one screw.

21. (Previously Presented) The pneumatic structural element according to claim 1, wherein the rigid plate-shaped flange comprises at least one second set of first and second holes operable to allow attachment of at least one additional pneumatic structural element.

22. (Previously Presented) A pneumatic structural element comprising:
an elongated gas-tight inflatable hollow body having a longitudinal axis extending between opposing ends of the inflatable hollow body;
at least one compression member disposed on a longitudinal side of the inflatable hollow body and longitudinally extending the length of the hollow body substantially parallel to the longitudinal axis, the at least one compression member being subjected to axial compression responsive to an operational load applied to the pneumatic structural element;
at least two flexible tension members wound around the inflatable hollow body and longitudinally extending between the ends of the hollow body, the at least two flexible tension members being subjected to axial tension and equal stresses responsive to the operational load;
a rigid plate-shaped flange disposed at each end of the inflatable hollow body and connected to both the at least one compression member and the at least two flexible tension members, such that the at least one compression member is disposed between the at least two flexible tension members, the at least one compression member and the at least two flexible tension members being interoperably coupled to each other at the respective ends of the hollow body, each flange having an opening removably receiving a respective end of the hollow body and removably engaging a circumference of the hollow body, the flange operable to support a first compression force transmitted through and directed along a length of the compression member and a second tensile force transmitted through each of the at least two flexible tension members, the second tensile force being directed along a length of the at least two tension members;
wherein each at least one compression member is securely fastened within a respective first hole in each flange, and wherein the at least two flexible tension members are each securely fastened within a respective second hole in each flange; and

wherein the flange facilitates connection of the pneumatic structural element with a nodal connecting element for connecting the hollow body with other gas-tight inflatable hollow bodies.

23. (Currently Amended) The pneumatic structural element according to claim 22, wherein the at least one compression member is connected to the flange by way of a screw fastened to the at least one compression member and received through the first hole in the flange and; and

wherein the at least two flexible tension members are each received through a respective one of the second holes in the flange and each fastened thereto with a nut.